amplified cDNA fragment;

cloning the amplified cDNA fragment into a plasmid;

producing a DNA molecule corresponding to the cloned cDNA fragment;

sequencing the produced DNA molecule, thereby determining the sequence of the eluted cDNA fragment; and

comparing the sequence of the eluted cDNA fragment to the sequences in a database thereby recognizing sequence identities and similarities.

15. The method of claim 14 wherein the step of comparing the sequence of the eluted cDNA fragment to the sequences in a database is performed using a computer.

16. The method of claim 15 comprising the additional step of displaying the results of the comparison graphically.

17. A method for recognizing sequence identities and similarities between the sequence of a cDNA fragment corresponding to a mRNA molecule present in a sample and a database of sequences, comprising the steps of :

eluting a cDNA fragment corresponding to a mRNA molecule present in a sample, where the cDNA fragment has a length determined by the position of a restriction endonuclease recognition site and a poly(A) tail of the mRNA molecule;

determining a partial sequence of the cDNA fragment by performing a polymerase chain reaction with a 5' PCR primer corresponding to the sequence of the restriction endonuclease recognition site and comparing the determined partial sequence of the eluted cDNA fragment and the length of the cDNA fragment to the sequences in a database thereby recognizing sequence identities and similarities.

Attached hereto is a marked-up version of the above amended claims 14-17.